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The prevalence of females diagnosed as conduct disordered when DSM-III and when DSM-III-R are employed: A comparison

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The prevalence of females diagnosed as conduct disordered when DSM-III and when DSM-III-R are employed: A comparison

Abstract

Historically, significant gender differences have been reported in the prevalence rates of conduct disordered youth (Zoccolillo, 1993). This differential has led to considerable confusion concerning the nature of the disorder and the individuals directly affected. Further, this differential has made it difficult for practitioners, in schools and in other settings, to comprehend the nature of conduct disorders within a rapidly changing society. Zoccolillo reports that male:female ratios have ranged anywhere from 3:1 to 9.3:8. Reasons for this variation are unclear, but may be associated with such factors as the various criteria employed, rapid change of gender roles in society, age, and clinical competencies of those charged with identifying individuals who may be conduct disordered.

THE PREVALENCE OF FEMALES DIAGNOSED
AS CONDUCT DISORDERED WHEN DSM-III
AND WHEN DSM-III-R ARE EMPLOYED:
A COMPARISON

A Thesis
Submitted
In Partial Fulfillment
of the Requirements for the Degree
Masters of Arts

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University of Northern Iowa
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This Research Paper by: JODEE J. BOHR

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Degree of Master of Arts in Education: General Educational Psychology.

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TABLE OF CONTENTS

2

INTRODUCTION.....	4
Chapter I:	
PURPOSE, SIGNIFICANCE AND ORGANIZATION OF THE PAPER.....	5
Purpose.....	5
Significance.....	6
Organization.....	7
Chapter II:	
DEFINITIONS.....	8
DSM-III Criteria.....	8
DSM-III-R Criteria.....	9
Chapter III:	
DSM-III STUDIES.....	10
Offord et al., (1986).....	10
Anderson et al., (1987).....	13
Kashani et al., (1987).....	16
McGee et al. (1987).....	19
Chapter IV:	
DSM-III-R STUDIES.....	20
Cohen et al., (1987).....	20
Cohen et al., (1992).....	22
Lewinsohn et al. (1993).....	24
Chapter V:	

SUMMARY OF THE PAPER.....	27
REFERENCES.....	31
Appendix A:	
DSM-III CRITERIA.....	33
Appendix B:	
DSM-III-R CRITERIA.....	37
Appendix C:	
TABLE I: Prevalence of Conduct Disorder by Gender and DSM-III Criteria.....	39
Appendix D:	
TABLE II: Prevalence of Conduct Disorder by Gender and DSM-III-R Criteria.....	41

INTRODUCTION

Historically, significant gender differences have been reported in the prevalence rates of conduct disordered youth (Zoccolillo, 1993). This differential has led to considerable confusion concerning the nature of the disorder and the individuals directly affected. Further, this differential has made it difficult for practitioners, in schools and in other settings, to comprehend the nature of conduct disorders within a rapidly changing society. Zoccolillo reports that male:female ratios have ranged anywhere from 3:1 to 9.3:8. Reasons for this variation are unclear, but may be associated with such factors as the various criteria employed, rapid change of gender roles in society, age, and clinical competencies of those charged with identifying individuals who may be conduct disordered.

The present investigation focuses on one variable which may affect the gender-specific incidence rates of individuals identified as conduct disordered: the different classification criteria employed in the DSM-III (APA, 1980) and the DSM-III-R (APA, 1987). Data concerning the recent DSM-IV (APA, 1994) were not included in the present study because the author was unable to identify any empirical investigations which

both employed the DSM-IV criteria and focused on the question addressed in the current paper. As discussed later, DSM-III and DSM-III-R employ somewhat different criteria. Moreover, the two texts appeared during a period in which the authors of the DSM series expressed growing sensitivity to gender differences. Therefore, it is possible that the DSM-III and the DSM-III-R reflect finer differences concerning gender-specific behaviors. Scogin (1994) reports problems with the DSM-III-R diagnostic criteria for depression in the identification of a majority of older adults who are experiencing depressive difficulties. This may be a significant correlation to the differences in the prevalence rates of conduct disorder when the DSM-III and DSM-III-R diagnostic criteria are employed.

Chapter I:

PURPOSE, SIGNIFICANCE AND ORGANIZATION OF THE PAPER

Purposes of this paper

This investigation reviews the historic development of the concept of conduct disordered behavior within American society, examines and specifies the diagnostic criteria employed in the DSM-III and the DSM-III-R, and appraises the research

to assess whether any differences in the incidence rates of males and females with respect to conduct disorder are associated with DSM-III and DSM-III-R criteria.

The detection of conduct disorder is examined in this paper by comparing the prevalence of conduct disordered youth when different DSM criteria are employed. Data were drawn from all studies located through CD-ROM searches which identified 79 relevant studies. Descriptors used for the search included combinations of the following: conduct disorder, gender differences, sex differences, DSM-III criteria, DSM-III-R criteria, DSM-IV criteria, prevalence, incidence, and females.

Significance of the Paper

Currently, school psychologists encounter a new social situation with regard to the incidence of conduct disorder as a significant health and social problem (Zahn-Waxler, 1993). Therefore, this paper may have significance in determining if there has been a change in the prevalence of conduct disordered females when DSM-III and DSM-III-R criteria are employed, and what meaning this may have with respect to the specific

interventions school psychologists may employ. This investigation may therefore clarify our understanding of conduct disorder during a period of rapid social change, which may lead to more equitable treatments and interventions for conduct disordered individuals with respect to gender. Moreover, this investigation may raise significant questions which may lead to further research and/or replication with regard to DSM-III and DSM-III-R, as well as DSM-IV.

Organization of the Paper

This paper begins by defining the different DSM-III and DSM-III-R criteria in identification of conduct disordered youth. Appendix A, page 33 and Appendix B, page 37, fully define the diagnostic criteria for each text. Next, seven major studies are assessed with regard to specific DSM criteria employed in each study.

In the first four studies, the DSM-III criteria are employed to identify the prevalence of conduct disordered youth. The gender ratio of boys:girls found in these studies ranged from 9.3:8 to 3.1:0. Again, reasons for this variation are unclear; however, one reason may be the DSM-III diagnostic criteria employed.

Appendix C: Table I, page 39, lists the complete prevalence rates of the four longitudinal studies by the following variables: gender, age, and demographic data.

Next, the three studies which utilize the DSM-III-R criteria are examined. One consistent finding across all three of these studies is that there is still a significant difference between males and females being identified as conduct disordered, with the male:female ratios ranging from 8.0:0 to 15.8:9.2. This difference may be due to the DSM-III-R diagnostic criteria employed. Research is unclear as to whether this is the only variable affecting the gender-specific prevalence rates. Age, gender, population, and socioeconomic status may also affect these rates. However, this examiner is specifically considering one variable, the diagnostic criteria employed and its affects on the prevalence rates of conduct disordered youth.

Chapter II:

DEFINITIONS

DSM-III and DSM-III-R Criteria

Conduct disorder is defined by both the DSM-III

and the DSM-III-R as "a repetitive and persistent pattern of conduct in which either the basic rights of others and major age-appropriate societal norms or rules are violated" (APA, 1980, p. 45; APA, 1987, p. 95). However, the two definitions differ slightly, in that the DSM-III adds to its definition, "The conduct is more serious than the ordinary mischief and pranks of children and adolescents" (APA, 1980, p. 45).

Common characteristics found in both the DSM-III and the DSM-III-R are the use of physical aggression, regular use of nonprescribed drugs, irritability, low self-esteem, and provocative recklessness (APA, 1980; APA, 1987).

In contrast to the similarities of the DSM-III and DSM-III-R, the two texts report significantly different gender ratios of conduct disorder. DSM-III reports the sex ratios as "far more common among boys than among girls, the ratios ranging from 4:1 to 12:1" (APA, 1980, p.47). The DSM-III-R reports this same ratio as 9:2, which is in agreement with the present investigation. The significant differences in the gender-specific prevalence rates cited by the two texts reveal that the diagnostic criteria employed may affect

the prevalence rates of conduct disorder by gender.

Other differences include the number of subtypes cited by the two texts. Five subtypes are included in the DSM-III: undersocialized, aggressive; undersocialized, nonaggressive; socialized, aggressive; socialized, nonaggressive; and atypical. The complete criteria for DSM-III is listed in Appendix A, page 33. The DSM-III-R includes just three subtypes in its criteria: the Group Type, which roughly corresponds to the DSM-III Socialized Nonaggressive Type; the Solitary Aggressive Type, which is similar to the DSM-III Undersocialized Aggressive Type; and the Undifferentiated Type. The complete diagnostic criteria for the DSM-III-R is listed in Appendix B, page 37.

Chapter III:

DSM-III STUDIES

Offord et al., (1986)

Offord, Adler, and Boyle (1986) employed DSM-III criteria to examine the prevalence of conduct disorder in two different age groups of youth (4-11; 12-16) living in Ontario, Canada. According to Offord et al. (1986), boys had higher rates of identified conduct

disorder than girls, with an overall ratio of boys:girls aged 4-11 at 6.5:1.8 percent. Similarly, the overall ratio of adolescents was 10.4:4.1 percent. The prevalence of conduct disorder in females increased over one and a half times, reflecting the variance that may be a result of the diagnostic criteria employed. Conduct disorder is more common among boys regardless of their age, according to Offord et al. (1986).

The target population was those children born from January 1, 1966 to June 1, 1981, in Ontario, Canada. The participation rate among eligible households was 91.1 percent. This study was quite representative because its sample included both urban (pop.>25,000) and rural (pop.<25,000) populations, which increased its generalizability to varied populations and ages of children. Offord et al., (1986) specify the difference in prevalence by gender and also by rural/urban ratios. For further definition of the results and demographics refer to Appendix C: Table I, page 39. The study, which identified conduct disorder in children and adolescents according to the DSM-III criteria, primarily employed the Child Behavior Checklist (CBCL) to describe the basic list of items for measuring the

diagnostic criteria. The Survey Diagnostic Instrument (SDI) and other checklists were also used by three sources; parent, teacher, and child. According to Offord et al. (1986), the fifteen checklist responses were scored 0, 1, or 2, "indicating responses of 'never or not true,' 'sometimes or somewhat true,' and 'often or very true'" (p.273). The total scores can vary for both parents and teachers from 0-30, and a threshold score of eight or nine is a good indicator of the presence or absence of the diagnosis of conduct disorder made by a child psychiatrist. The increase of conduct disorder in boys compared to girls is in agreement with the literature, but the "markedly increased boy:girl ratio in younger children in rural areas has not been previously reported" (Connell, Irvine & Rodney, 1982; cited in Offord et al., 1986, p.277). This increase in younger children may be significant due to the diagnostic criteria being employed in this study; both the DSM-III and DSM-III-R do not specify the age at onset in the identification of conduct disordered youth. There may be a gap in the identification of conduct disordered adolescents, which may lead to a significant number of conduct disordered

youth not receiving treatment. Thus, it may be imperative for the diagnostic criteria to be broadened in that it may meet the needs of those adolescents.

Anderson et al., (1987)

Anderson, Williams, McGee, and Silva (1987) examined the prevalence of all common DSM-III disorders in a large sample of preadolescent children from the general population in Dunedin, New Zealand. Females were diagnosed as having conduct disorder fewer times than males, 1.9 percent. Conduct disorder was found in 6.3 percent of the males participating in this six year longitudinal study. Overall, Anderson et al. (1987) reported that approximately 17 percent of all subjects were identified as having one or more of the DSM-III disorders. Conduct disorder was found to be the fourth most prevalent DSM-III disorder in this study.

Children were selected to be in the Anderson et al. (1987) ongoing study of health, development, and behavior if they were born in Dunedin, New Zealand, between April 1, 1971, and March 31, 1972. Those still living in the Dunedin city area at the age of three years were sought for enrollment. Seven-hundred ninety-two children (four-hundred sixteen boys and

three-hundred seventy-six girls) aged 11 years who were currently enrolled at the Dunedin Multidisciplinary Health and Development Research Unit participated in this longitudinal study. Nine-hundred seventy-five children were enrolled, but for numerous reasons one hundred twelve children were not able to be interviewed for this study. According to Anderson et al. (1987), the absence of these one hundred twelve children was not significant to the study. Those children seen at three years of age did not differ in neonatal/perinatal problems or birth weight from those seen at 11 years of age. However, the children of single mothers, of lower socioeconomic groups, and of Polynesian ethnic groups are known to be under-represented in this sample. The children in the study represent 41 percent of 11-year-old children at Dunedin, New Zealand, intermediate schools. Refer to Appendix A, page 33 for the demographics of this investigation.

The DSM-III criteria were used to identify disorders in the participants. Three sources providing information about each subject were matched independently and in combination to the DSM-III criteria. Child, parent, and teacher protocols

provided additional information for frequency and degree of socialization for conduct disorder. Responses used to indicate symptoms were "definite" and "2." The "2" response counted as a response for a symptom which was referred to with more than one question. A senior child psychiatrist, independent of the study, checked the matching of the items to DSM-III criteria and appropriateness of severity of items (Anderson et al., 1987). Different degrees of certainty between the three informants were reported in identifying a case.

Levels one and two are the most pervasive and agreed upon cases. Conduct disorder was the second most strongly supported category. Of the children diagnosed with conduct disorder, twelve were given a level one or two agreement rating, and fifteen children were given a level three agreement. None of the children diagnosed with conduct disorder were given a level four (weak) agreement (Anderson et al., 1987).

Anderson et al., (1987) reported that a majority of the socialized-aggressive children resemble aggressive unsocialized conduct disorder, suggesting that in this mildly conduct disordered group, the

cutoff of one socialized behavior may be too restrictive. According to Anderson et al., the DSM-III criteria may be overrefined for a general population sample.

The DSM-III diagnostic criteria employed in Anderson et al.'s investigation showed a significant difference in the gender-specific prevalence rates. The male:female ratio was 3.2:1. Data were gathered from three sources: child, parent, and teacher. A child psychiatrist interpreted the data, and made the diagnosis for those children who fit the criteria for conduct disorder.

Kashani et al., (1987)

Kashani et al. (1987) employed the DSM-III was employed to identify conduct disordered adolescents from a community sample attending Columbia, MO public schools. In this nonreferred sample, 9.3 percent of the boys, and 8.0 percent of the girls were identified as having conduct disorder. A comparison of this prevalence rate to other studies employing the DSM-III criteria are listed in Appendix C: Table 1, page 37. The sample consisted of one-hundred fifty adolescents aged 15-16, with an equal number of boys and girls.

This represented seven percent of all adolescents attending Columbia, MO schools. The complete demographics of the subjects participating in this study are listed in Appendix C: Table 1, page 38. The nonclinically referred subjects were contacted by telephone and asked to participate in this study. The consent of the adolescent and the adolescents' parents was required, which increased the refusal rate.

Two structured interviews, the Diagnostic Interview for Children and Adolescents (DICA) and the DICA-Parent Version were administered to the subjects and parents of the subjects as one of the determining criterion for the diagnosis of conduct disorder. The subjects also completed the Parental Bonding Instrument; the Conflict Resolution Scale; and the Peirs-Harris Children's Self-Concept Scale. Each parent was required to complete the Child Behavior Profile; and also gave information regarding their socioeconomic and marital status.

A four-point scale was developed to rate the subject's need for treatment: "1=healthy -no need for treatment; 2=mildly impaired -might benefit from treatment; 3=moderately impaired -definite need for

treatment; 4=severely impaired -serious need for treatment" (Kashani et al., 1987, p. 585). Based on the above criteria, a child psychiatrist and a clinician reviewed all the information, and with interrater reliability greater than 95 percent, concluded if the child was conduct disordered and in need of psychiatric treatment. An important consideration to note, according to Kashani et al., is that "we relied on trained mental health professionals rather than lay personnel to interview our subjects, and agreement of at least two mental health professional was required for both a diagnosis and the presence of 'caseness'" (Kashani et al., 1987, p. 588).

Kashani et al., (1987) identified a higher percent of conduct disordered females in comparison to Anderson et al., (1987) and Offord et al., (1986) when the DSM-III diagnostic criteria is employed in all three studies. The reason for this variance is unclear. One variable that may affect these prevalence rates is the person charged with identifying the conduct disordered youth. The reliability of the diagnosis of conduct disordered youth may be more valid using mental health

professionals, which only Kashani et al., (1987) employed in his examination.

McGee et al., (1992)

McGee et al., (1992) examined the prevalence of DSM-III disorders at age 15 from the same cohort group investigated by Anderson et al., (1987) at age 11. According to McGee et al., (1992) a reversal in the sex ratios occurred in children diagnosed with conduct disorder at age 11 (Anderson et al., 1987) compared with those conduct disordered youth at age 15. At age 11, the ratio of boys:girls was 21:6. In contrast, at age 15, the overall ratio reversed to 7.2:7.4. These results indicate a two and a half fold increase in girls diagnosed with conduct disorder from age 11 to 15 (McGee et al., 1992).

DSM-III criteria was used to differentiate by gender the prevalence of Aggressive and Nonaggressive types of conduct disorder. McGee et al., (1992) reported that 3.1 percent of the boys were diagnosed as Aggressive Type Conduct Disorder. None of the girls were so diagnosed. In contrast, 7.4 percent of the girls were identified with Nonaggressive Conduct Disorder, compared to 4.1 percent of the boys. Refer

to Appendix C: Table I, page 37, for the results and demographic data.

According to McGee et al., (1992) females at age 15 outnumbered the boys in all DSM-III categories of disorders examined in this study except attention deficit and aggressive conduct disorder. One conclusion that can be made is that the age of onset for girls may be later than boys, therefore there appear to be significantly more females identified as conduct disordered at adolescence.

Chapter IV:

DSM-III-R STUDIES

Cohen et al., (1987)

In 1975 Cohen, Velez, Kohn, Schwab-Stone, and Johnson (1987) began a longitudinal study in New York. The results of this study using the Revised New York DSM-III-R criteria were as follows: For every 100 preadolescent child (aged 9-12), no females and eight males were diagnosed with conduct disorder. In the 13-18 age range, nine percent of the males were diagnosed as conduct disordered, while three percent of the females were identified as conduct disordered. According to Cohen et al. (1987), these diagnoses and

specific rates conform to the expected pattern, with increases of conduct disordered youth during adolescence. Higher rates of conduct disorder are found more often in boys than in girls, especially in preadolescent children. Data were collected from a large epidemiological random sample of children. To qualify as participants in this study, families must have at least one child between the ages of one and ten. In 1983, a follow-up of the original sample located 85 percent of the families and reinterviewed 75 percent. Demographics are listed in Appendix D: Table II, page 41.

Cohen et al., (1987) proposed a rationale for revised algorithms designed to score for DSM-III-R diagnoses in children. For a stage one diagnosis, the recommended procedure for scoring each DSM-III-R criterion was followed. Therefore, if either the mother or child responded positively to any diagnostic criterion, that criterion was considered to have been met. However, according to Cohen et. al, (1987) this may give unrealistically high prevalence for some diagnoses. Therefore, only possible diagnoses were given to those children meeting the diagnostic criteria

in this manner. In the second stage of the diagnostic procedure, Cohen et al. (1987) was concerned with improving the specificity of the diagnoses, so a larger number of items was included from both the Diagnostic Interview Schedule for Children (DISC) and the DISC-P (Parent form) to improve the psychometric properties of this resulting scale. Using this scaled measure, all children meeting the DSM-III-R criteria and with a scale score at least two standard deviations above the mean were considered to have definite diagnoses.

One conclusion that can be made from the study is that by employing the DSM-III-R criteria in identifying conduct disordered females, there appears to be a higher percentage of females (3%) meeting this criteria than in the past when the DSM-III criteria was employed. However, there is still a significantly larger number of males identified as conduct disordered than females. This may reflect the bias in the DSM-III-R criteria since this criteria was developed using only samples from relevant male and no female populations (Zoccolillo, 1993).

Cohen et al., (1993) study

Cohen et al., (1993) examined the prevalence rates

of conduct disorder by gender in a large community in upstate New York. In this longitudinal study, 3.8 percent of the females and 16 percent of the males aged 10-13 were identified as conduct disordered. At age 14-16, a higher overall incidence of conduct disorder was reported. According to Cohen et al. (1993), 9.2 percent of females were identified as conduct disordered. In comparison at this same age group, 15.8 percent of the males were diagnosed as conduct disordered. This shows a significant overall increase in the diagnosis of conduct disorder. The complete demographics and prevalence rates by gender are listed in Appendix D: Table II, page 41.

According to Cohen et al., (1993), "Age and gender differences in the prevalence of disorder are among the most basic epidemiological data that can be gathered. These differences can be used to determine whether some groups may be significantly underserved" (p.851). From this quote, the reader may infer the relevance of the present investigation. In terms of groups being "significantly underserved," as noted previously, females may not meet the DSM-III or DSM-III-R criteria for conduct disorder because the criteria was developed

using only samples of males, and no samples of females (Zoccolillo, 1993). Females may manifest different characteristics of antisocial behavior than males. Thus, the diagnostic criteria may not be equitable for females.

The data reported by Cohen et al. (1993) show higher prevalence rates of both conduct disordered males and females when compared to the study conducted by Cohen et al., (1987). However, in agreement with the literature assessed in the present study, the gender ratios of conduct disordered youth differ significantly.

Lewinsohn et al., (1993)

Lewinsohn, Hops, Roberts, Seeley, & Andrews (1993) employed DSM-III-R criteria to identify disorders in a large sample of high school students. Two semistructured diagnostic interviews were administered to each adolescent with one year of time elapsing between each interview. Results were as follows: Following the first interview (Time one), 1.68 percent of the females and 4.88 percent of the males were identified as conduct disordered. One year later, a second diagnostic interview revealed a slight decrease

in both the females and the males identified as conduct disordered, with rates of 1.60 percent and 4.01 percent, respectively.

The population was representative of students living in both urban and rural communities, which consisted of the total enrollment of nine high schools in west central Oregon. The demographic characteristics of the sample were compared to the 1980 census. No differences were found on gender, ethnic status, or parental education level. Refer to Appendix D: Table II, page 41, for the complete demographic listing. Each adolescent participated in a semistructured diagnostic interviewing the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS: Chambers et al., 1985; Puig-Antich & Chambers, 1983; cited in Lewinsohn et al., 1993). The K-SADS interviews were conducted with the adolescents at Time 1 and provided the information for the ratings for the presence of symptoms, diagnoses for any current or past disorder, age at onset of disorder, and duration of each episode. The interviewers had advanced degrees in clinical or counseling psychology or social work and were required to demonstrate at

least .80 interrater reliability on two consecutive training videos. The Longitudinal Interval Follow-up Evaluation (LIFE; Shapiro & Keller, 1979 cited in Lewinsohn et al., 1993) was scheduled for the second diagnostic interview (Time 2), was administered approximately 1 year after the K-SADS (Time 1). Subjects were asked to provide detailed information about their mental status since Time 1. LIFE also draws specific information about the longitudinal course of all DSM-III-R disorders. An interesting perspective in the Lewinsohn et al. (1993) investigation is that the psychiatrists responsible for the identification of DSM-III-R disorders, specifically conduct disorder, relied solely on the diagnostic information provided by the adolescent during interview one and interview 2. This may affect the prevalence rates of those individuals identified as conduct disordered, as the adolescent may not accurately inform the psychiatrist of the symptoms the individual may or may not be displaying. The previous studies assessed in this investigation employed more than one source, such as both a parent or teacher and a child, who provided the diagnostic information about the

individual suspected as conduct disordered.

Information that is gathered from more than one source may then be validated against the other sources, which may provide a more accurate overall perspective of the individual.

Chapter V:

SUMMARY OF THE PAPER

In summary, the purpose of this investigation was to assess relevant studies which employed the DSM-III and the DSM-III-R to determine whether the diagnostic criteria employed may affect the gender-specific prevalence rates in conduct disordered youth. Each of the seven studies examined reported that conduct disorder is significantly more prevalent in boys than in girls. There were significant variations in these prevalence rates, with male:female ratios ranging from 3:1 to 9.3:8.

After assessing the variation in prevalence rates, one may conclude that the diagnostic criteria employed in the studies may not be appropriate for identifying conduct disorder in females, as no females were included in the development of the DSM-III and the DSM-III-R diagnostic criteria (Zoccolillo, 1993).

Moreover, without examining females separately, one is treating all conduct disordered youth the same.

Strong empirical evidence reveals that antisocial behavior patterns such as aggression and violence are manifested differently in females than in males

(Lytton, 1990; Maccoby and Jacklin, 1974, 1980; Parke and Slaby, 1983; Tieger, 1980; cited in Zahn-Waxler, 1993; Rutter, 1982). According to Zoccolillo (1993), by requiring females to adhere to the diagnostic criteria using male populations, one may be defining females as "miniature males" (p.80). Thus, females may be underrepresented in these rates due to the different anti-social behavior patterns females may display, and the distinct ways in which conduct disorder is manifested in females (Earls, 1987).

Moreover, those females who may display certain anti-social behavior patterns, yet not meet the diagnostic criteria, may not receive the necessary treatment.

Zoccolillo (1993) suggests to broaden the diagnostic criteria to include other forms of behavior that would capture the ways in which females act out against societal norms.

Research shows a greater number of females meeting

the criteria for conduct disorder during the adolescence development years. This may be associated with the onset of puberty and menarche (Brooks-Gunn and Warren, 1989). It is important to identify females at the earliest age in which symptoms of conduct disorder are present. Therefore, early intervention and treatment may be more beneficial to the individual later in life.

Certain limitations were stated by this author which may affect the variation in the prevalence rates of conduct disorder. These prevalence rates may be affected by such variables as the age of the participants, the socioeconomic status, the population and location in which the study was conducted, and the clinical competencies of those persons charged with identifying individuals who may be conduct disordered. The present investigation focused on one variable, the diagnostic criteria employed in each study. These other variables, present in each study, were variables over which this examiner had no control. In the ideal situation, the comparison of the DSM-III and the DSM-III-R diagnostic criteria would be conducted under such conditions in which the previously mentioned

variables would be controlled for. The only variation in an ideal study would be the DSM-III and the DSM-III-R diagnostic criteria employed. The author was unable to locate any study in which these ideal conditions were met. Thus, future research could investigate the prevalence rates of conduct disordered youth when the current DSM-IV diagnostic criteria is employed and compared to the DSM-III-R and the DSM-III, with other variables controlled. Future research could also examine the prevalence rates of conduct disorder in young females versus conduct disorder in adolescent females, and the possible correlation of an increase of conduct disorder in early maturing females.

Conduct disorder is a serious health and social problem (Zahn-Waxler, 1993). Treatments cannot come before the issue of the gender-specific prevalence rates of conduct disorder is fully realized. The implications for school psychologists lie in comprehending the nature of conduct disorder with respect to the specific diagnostic criteria employed in identifying those individuals as conduct disordered. The role of the school psychologist exists in the development of gender equitable interventions.

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Appendix A:

DSM-III DIAGNOSTIC CRITERIA FOR CONDUCT DISORDER

312.00 Conduct Disorder, Undersocialized, Aggressive

- A. A repetitive and persistent pattern of aggressive conduct in which the basic rights of others are violated, as manifested by either of the following:
 - (1) physical violence against persons or property (not to defend someone else or oneself). e.g., vandalism, rape, breaking and entering, fire-setting, mugging, assault
 - (2) thefts outside the home involving confrontation with the victim (e.g., extortion, purse-snatching, armed robbery). (APA, 1980, p. 47)
- B. Failure to establish a normal degree of affection, empathy, or bond with others as evidenced by no more than one of the following indications of social attachment:
 - (1) has one or more peer group friendships that have lasted over six months
 - (2) extends himself or herself to others even when no immediate advantage is likely
 - (3) apparently feels guilt or remorse when such a reaction is appropriate (not just when caught or in difficulty)
 - (4) avoids blaming or informing on companions
 - (5) shares concern for the welfare of friends or companions
- C. Duration of pattern of aggressive conduct of at least six months.
- D. If 18 or older, does not meet the criteria for Antisocial Personality Disorder. (APA, 1980, p. 48)

312.10 Conduct Disorder, Undersocialized, Nonaggressive

- A. A repetitive and persistent pattern of nonaggressive conduct in which either the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by any of the following:
 - (1) chronic violation of a variety of important rules (that are reasonable and age-appropriate for the child) at home or at school (e.g., persistent truancy, substance abuse)
 - (2) repeated running away from home overnight
 - (3) persistent serious lying in and out of the home
 - (4) stealing not involving confrontation with a victim

B. Failure to establish a normal degree of affection, empathy, or bond with others as evidenced by no more than one of the following indications of social attachment:

- (1) has one or more peer group friendships that have lasted over six months
- (2) extends himself or herself for others even when no immediate advantage is likely
- (3) apparently feels guilt or remorse when such a reaction is appropriate (not just when caught or in difficulty)
- (4) avoids blaming or informing on companions
- (5) shows concern for the welfare of friends or companions

C. Duration of nonaggressive conduct for at least six months. (APA, 1980, p. 48)

D. If 18 or older, does not meet the criteria for Antisocial Personality Disorder. (APA, 1980, p. 49)

312.23 Conduct Disorder, Socialized, Aggressive

A. A repetitive and persistent pattern of aggressive conduct in which the basic rights of others are violated, as manifested by either of the following:

- (1) physical violence against persons or property (not to defend someone else or oneself), e.g., vandalism, rape, breaking and entering, fire-setting, mugging, assault
- (2) thefts outside the home involving confrontation with a victim (e.g., extortion, purse-snatching, armed robbery)

B. Evidence of social attachment to others as indicated by at least two of the following behavior patterns:

- (1) has one or more peer-group friendships that has lasted over six months
- (2) extends himself or herself for others even when no immediate advantage is likely
- (3) apparently feels guilt or remorse when such a reaction is appropriate (not just when caught or in difficulty)
- (4) avoids blaming or informing on companions
- (5) shows concern for the welfare of friends or companions

C. Duration of aggressive conduct of at least six months.

- D. If 18 or older, does not meet the criteria for Antisocial Personality Disorder. (APA, 1980, p. 49)

312.21 Conduct Disorder, Socialized, Nonaggressive

- A. A repetitive and persistent pattern of nonaggressive conduct in which either the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by any of the following:
- (1) chronic violations of a variety of important rules (that are reasonable and age-appropriate for the child) at home or at school (e.g., persistent truancy, substance abuse)
 - (2) repeated running away from home overnight
 - (3) persistent serious lying in and out of the home
 - (4) stealing not involving confrontation with a victim"
- (APA, 1980, p. 49)
- B. Evidence of social attachment to others as indicated by at least two of the following behavior patterns:
- (1) has one or more peer-group friendships that have lasted over six months
 - (2) extends himself or herself to others even when no immediate advantage is likely
 - (3) apparently feels guilt or remorse when such a reaction is appropriate (not just when caught or in difficulty)
 - (4) avoids blaming or informing on companions
 - (5) shows concern for the welfare of friends or companions
- C. Duration of pattern of nonaggressive conduct of at least six months.
- D. If 18 or older, does not meet the criteria for Antisocial Personality Disorder. (APA, 1980, p. 50)

Appendix B:

DSM-III-R DIAGNOSTIC CRITERIA FOR CONDUCT DISORDER

CONDUCT DISORDER

- A. A disturbance of conduct lasting at least six months, during which at least three of the following have been present:
1. Has stolen without confrontation of a victim on more than one occasion (including forgery)
 2. Has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning)
 3. Often lies (other than to avoid physical or sexual abuse)
 4. Has deliberately engaged in firesetting
 5. Is often truant from school (for older person absent from work)
 6. Has broken into someone else's house, building, or car
 7. Has deliberately destroyed others' property (other than by firesetting)
 8. Has been physically cruel to animals
 9. Has forced someone into physical activity with him or her.
 10. Has used a weapon in more than one fight
 11. Often initiates physical fights
 12. Has stolen with confrontation of a victim (e.g., mugging, purse-snatching, extortion, armed robbery)
 13. Has been physically cruel to people
- B. If 18 or older, does not meet the criteria for "Antisocial Personality Disorder" (APA, 1987, p. 55).

TYPES:

- 312.20 Solitary Aggressive Type:
aggressive physical behavior initiated by the child and usually directed toward both adults and peers; repeated failure in intervention programs.
- 312.00 Group Type:
conduct problems that occur mainly as a group activity with peers. Physical aggression may be manifested.
- 312.90 Undifferentiated Type:
children diagnosed with conduct disorder but whose pattern of behavior does not fit neatly into either of the other subtypes. May be much more common than either of the two subtypes.

Appendix C:

TABLE I:

PREVALENCE OF CONDUCT DISORDER BY GENDER
AND DSM-III CRITERIA

TABLE 1: Prevalence of Conduct Disorder by Gender and DSM-III Criteria

	Offord et al., (1986)		Anderson et al., (1987)	Kashani et al., (1987)	McGee et al., (1992)
Ages	4-11	12-16	11	14-16	15
Males	Urban: 7.2%	Urban: 9.9%	Aggressive 21%	9.3%	Total: 7.2%
	Rural: 5.1%	Rural: 5.2%			Aggressive: 3.1%
	Total: 6.5%	Total: 10.4%			Non-aggressive 4.1%
Females	Urban: 2.3%	Urban: 3.6%	Aggressive 6%	8%	Total: 7.4%
	Rural: 0.6%	Rural: 5.2%			Aggressive: 0.0%
	Total: 1.8%	Total: 4.1%			Nonaggressive 7.4%
Character-istics of subjects	Excluded from sample were: children living on Indian reserves, collective dwellings/ institutions, and dwellings constructed since June 1, 1981.		Under-represented children of single mothers, lower socioeconomic groups, and Polynesian ethnic groups.	94.7% Caucasian 5.3% Black & Oriental	European origin; under-representative of children from Maori or other Polynesian backgrounds.
Location/Community	Ontario, Canada urban rural		Dunedin, New Zealand (metropolitan area)	Columbia, Missouri	Dunedin, New Zealand
Socio-economic Status	On welfare; Subsidized housing; low income; unemployed; overcrowding; low mother's education; single parent; large sibship; urban residence		Not stated; sample under-represented lower socioeconomic groups.	Class I 10.7% Class II 31.3% Class III 27.3% Class IV 1.4%	Somewhat more advantaged when compared with the rest of the country.
Sample Size	not specifically stated "large community"		N=792	N=150	N=976

Appendix D:

TABLE II:

PREVALENCE OF CONDUCT DISORDER BY GENDER
AND DSM-III-R CRITERIA

Appendix D:

TABLE II:

PREVALENCE OF CONDUCT DISORDER BY GENDER
AND DSM-III-R CRITERIA

Table II: Prevalence of Conduct Disorder by Gender and DSM-III-R Criteria

	Cohen et al. (1987)		Cohen et al., (1993)		Lewinsohn et al., (1993)	
Ages	9-12	13-18	10-13	14-16	14-18	
Males	8%	9%	16.0%	15.8%	Time 1 4.88%	Time 2 1.68%
Females	0%	3%	3.8%	9.2%	Time 1 1.68%	Time 2 1.60%
Characteristics of Subjects	> 10% minority 68% of the females still intact		66% intact families 91% caucasian 54% Catholic		52.9% female 8.9% non-caucasian 71.3% living with two parents 53% living with biological parents 14.9% ninth-graders 27.2% tenth-graders 26.3% eleventh-graders 31.6% twelfth-graders	
Location/Community	Two countries in upstate New York: one identified as the "worst" county; the other as the "best" county.		Upstate New York; 76% urban or suburban; 24% rural or small town.		Western Oregon: two urban communities (pop. 200,000) three rural communities.	
Socioeconomic Status	median family income = \$24,000		9% > \$60,000 10% 30,000 > \$60,000 48% \$18,000 > \$30,000 25% \$10,000 > \$18,000 8% > \$10,000 4% on welfare		middle class: 10.3% professionals 57.9% minor professionals 21.2% skilled 8.0% semi-skilled	
Sample Size	large, epidemiological sample of children		N=541	N=508	N=1710	N=1508